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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,034	06/24/2004	Satoshi Fukunaga	10921.231USWO	2255
23552	7590	09/21/2005	EXAMINER	
MERCHANT & GOULD PC			DESTA, ELIAS	
P.O. BOX 2903			ART UNIT	
MINNEAPOLIS, MN 55402-0903			PAPER NUMBER	

2857

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/500,034

Applicant(s)

FUKUNAGA ET AL.

Examiner

Elias Desta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 and 14 is/are allowed.
- 6) ☒ Claim(s) 1 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 2-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/24/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Detailed Action

Drawing

1. The drawing is objected to because of the following minor informalities:
 - Figs. 1A and 1B: functional boxes should be labeled as to function.

Abstract

2. The abstract is object to because of the following minor informalities. The abstract presented by the applicant exceeds 150 words in length, which is required by the office because the space provided for the abstract on the computer tape used by the printer is limited. Therefore, the applicant is required to review the abstract and amend accordingly. Further, the form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure.

Claim rejection – 35 U.S.C. 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1, 10, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over EPA-Method 9014 (EPA Publication Manual, 'Titrimetric and Manual Spectrophotometer Determining Method for Cyanide') in view of Khan et al. (Analytical Science, 'Determination of Trace Amounts of Copper (II) by using Catalytic Redox [Reduction Oxidation] Reaction between Methylene Blue and Ascorbic Acid', hereon Khan).

In reference to claims 1 and 11: EPA-Method 9014 teaches a concentration of sulfide measuring method (see EPA-Method 9014, page 1, sections 1.0 and 2.0). The method includes selecting a calibration curve (see figure from page 7) optimum for computing concentration of a measurement target substance from a calibration curve (or curb of absorbance, as noted in Fig., on page 7, sections 7.4.2, 7.3.2, 7.3.4 and 7.6). The calibration curve is prepared based on the plurality of output generated upon lapse of the same reaction time from a standard reaction system containing a standard reagent (as noted in pages 2-3) of a known different concentration (as noted in page 4, section 7.3.1) and the reactant (standard solution).

However, EPA-Method 9014 does not teach having a plurality of calibration curves with the same lapse of reaction time.

Khan teaches the method of preparing calibration curve based on a plurality of outputs generated upon lapse of the same reaction time from plurality of outputs

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generated upon lapse of the same reaction time or fixed concentration method (see Khan, page 1196, section 3 of Results & Discussion and Fig. 1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the concentration method taught by EPA-Method 9014 and include multiple calibration curves as noted in Khan, Fig. 1, with output generated (absorbance change) upon lapse of the same reaction time from plurality of standard reaction systems in order to obtain a plurality of curves that differ from each other in reaction time based on calibration point of preparation because the determination range provides linear input/output representation with relative standard deviation in order to establish the best reaction condition and maximum sensitivity (see Khan, page 1196, Results and Discussions).

With regard to claims 10 and 12: EPA-Method 9014 further teaches that the concentration measuring method is an optical response obtained when the reaction system is irradiated with light (see EPA-Method 9014, page 3, section 7.2, spectrophotometer determination).

Allowable Subject Matter

5. Claims 2-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowance

6. Claims 13 and 14 are allowed. The following is an examiner's statement of reasons for allowance:

In reference to claim 13: EPA-Method 9014 or Khan does not teach that the specific calibration curve comprises a higher concentration portion for a concentration range higher than an intersection concentration which corresponds to an intersection of the first calibration curve and the second calibration curve, and a lower concentration portion for a concentration range lower than the intersection concentration. Further the claimed invention includes a higher concentration portion comprising a portion of a second calibration portion of second calibration curve for a concentration range higher than the intersection concentration and the lower concentration portion comprising a portion of the first calibration curve for a concentration range lower than the intersection concentration.

Claim 14 is dependent upon claim 13 and contains further limitations.

Conclusion

7. Citation of pertinent prior art:

- McDevitt et al. (U.S. PAP 2004/0053322) teaches system and method for analysis of bodily fluids.
- Glezer et al. (U.S. PAP 2003/0113713) teaches method and apparatus for conducting multiple measurements on a sample.

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- Nygren et al. (U.S. Patent 4,558,012) teaches method and apparatus for detecting and measuring the concentration of a chemical substance.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (571)-272-2214. The examiner can normally be reached on M-Thu (8:30-7:00).

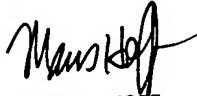
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)-272-2216. The fax phone numbers for the organization where this application or proceeding is assigned are (571)-273-8300 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)-272-1750.

Elias Desta
Examiner
Art Unit 2857

-ed

September 14, 2005


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800